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DATE: Thursday, January 31, 2008

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	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ		
☐	L8	LL2 and survivin and (cylcin D1) and Her2	0
☐	L7	L3 and Her2	33
☐	L6	LL3 and chymotrypsinogen	1
☐	L5	L3 and (cyclin D1)	15
☐	L4	L3 and survivin	9
☐	L3	L2 and FACS	356
☐	L2	L1 and (cancer or tumor or carcinoma)	2281
☐	L1	(molecular beacons)	3538

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NEWS 11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS 12	SEP 17	CA/CAplus enhanced with printed CA page images from 1967-1998
NEWS 13	SEP 17	CAplus coverage extended to include traditional medicine patents
NEWS 14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 15	OCT 02	CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 16	OCT 19	BEILSTEIN updated with new compounds
NEWS 17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS 18	NOV 19	WPIX enhanced with XML display format
NEWS 19	NOV 30	ICSD reloaded with enhancements
NEWS 20	DEC 04	LINPADOCDB now available on STN
NEWS 21	DEC 14	BEILSTEIN pricing structure to change
NEWS 22	DEC 17	USPATOLD added to additional database clusters
NEWS 23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS 24	DEC 17	DGENE now includes more than 10 million sequences
NEWS 25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 26	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 27	DEC 17	CA/CAplus enhanced with new custom IPC display formats
NEWS 28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 29	JAN 02	STN pricing information for 2008 now available
NEWS 30	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS 31	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS 32	JAN 28	MARPAT searching enhanced
NEWS 33	JAN 28	USGENE now provides USPTO sequence data within 3 days of publication
NEWS 34	JAN 28	TOXCENTER enhanced with reloaded MEDLINE segment
NEWS 35	JAN 28	MEDLINE and LMEDLINE reloaded with enhancements

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 NEWS EXPRESS  19 SEPTEMBER 2007:  CURRENT WINDOWS VERSION IS V8.2,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

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FILE 'HOME' ENTERED AT 09:32:45 ON 31 JAN 2008

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=> "molecular beacon"
"MOLECULAR IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s "molecular beacon"
       1258403 "MOLECULAR"
            84 "MOLECULARS"
       1258468 "MOLECULAR"
                 ("MOLECULAR" OR "MOLECULARS")
       2582788 "MOL"
        695771 "MOLS"
       2959908 "MOL"
```

```
                ("MOL" OR "MOLS")
       3470686 "MOLECULAR"
                ("MOLECULAR" OR "MOL")
          1319 "BEACON"
           738 "BEACONS"
          1648 "BEACON"
                ("BEACON" OR "BEACONS")
L1        1040 "MOLECULAR BEACON"
                ("MOLECULAR"(W)"BEACON")

=> duplicate remove L1
PROCESSING COMPLETED FOR L1
L2          997 DUPLICATE REMOVE L1 (43 DUPLICATES REMOVED)

=>

=> s L2 and (cancer or tumor or carcinoma)
L3          997 S L2
         345398 CANCER
          50795 CANCERS
         358255 CANCER
                (CANCER OR CANCERS)
         438359 TUMOR
         165127 TUMORS
         489396 TUMOR
                (TUMOR OR TUMORS)
         174738 CARCINOMA
          33933 CARCINOMAS
            171 CARCINOMATA
         182926 CARCINOMA
                (CARCINOMA OR CARCINOMAS OR CARCINOMATA)
L4           90 L3 AND (CANCER OR TUMOR OR CARCINOMA)

=> duplicate remove L4
PROCESSING COMPLETED FOR L4
L5           90 DUPLICATE REMOVE L4 (0 DUPLICATES REMOVED)

=> L5 and (survivin)
L5 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s L5 and survivin
L6           90 S L5
           2946 SURVIVIN
             36 SURVIVINS
           2949 SURVIVIN
                (SURVIVIN OR SURVIVINS)
L7           11 L6 AND SURVIVIN

=> duplicate remove L7
PROCESSING COMPLETED FOR L7
L8           11 DUPLICATE REMOVE L7 (0 DUPLICATES REMOVED)

=> d L8 bib abs 1-11

L8   ANSWER 1 OF 11  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2006:544511  CAPLUS
DN   145:44357
TI   Use of molecular beacons detecting cyclin D1 and
     survivin mRNAs in diagnostic imaging of cancer cells
IN   Yang, Lily
PA   Emory University, USA
```

SO PCT Int. Appl., 80 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006060561	A2	20060608	WO 2005-US43450	20051201
	WO 2006060561	A3	20060817		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	US 2006210979	A1	20060921	US 2005-542117	20050712
PRAI	US 2004-632666P	P	20041201		
	US 2005-542117	A	20050712		
	US 2003-439771P	P	20030113		
	WO 2004-US755	W	20040113		

AB A method of detecting the level of expression of diagnostic gene in a sample of cells for cancer diagnosis using mol. beacon probes is described. Specifically, the use of probes for the detection of cyclin D1 and survivin mRNAs are described for the diagnosis of breast cancer. The development of systems for the detection of cyclin D1 and survivin mRNAs is demonstrated. Use of mol. beacons to detect alleles of the K-ras gene in the diagnosis of pancreatic cancer is also demonstrated.

L8 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:1126100 CAPLUS
DN 148:29263
TI The relationship between mRNA and protein expression of survivin and apoptosis
AU Zheng, Hong; Liu, Yanxue; Sun, Baocun; Wang, Jiacang
CS Department of Biochemistry and Molecular Biology, Cancer Hospital of Tianjin Medical University, Tianjin, 300060, Peop. Rep. China
SO Zhongguo Zhongliu Linchuang (2006), 33(15), 862-866
CODEN: ZZLIEP; ISSN: 1000-8179
PB Zhongguo Zhongliu Linchang Bianji Weiyuanhui
DT Journal
LA Chinese
AB The objective of this paper is to study the mRNA copy number of survivin, protein expression of survivin and the apoptotic index (AI) in gastric carcinomas, to analyze the relationships between these 3 clin. parameters and pathol. results and to discuss the significance in terms of diagnosis and prognosis. The copy number of survivin mRNA was measured by quant. PCR with a mol. beacon probe, using a cDNA clone as a standard for the absolute quant. assay. The protein expression was investigated by immunohistochem. (IHC) SP method, and the apoptotic index was analyzed with TUNEL. The copy number of survivin mRNA and pos. rate of protein expression were higher in tumor tissues than in the normal controls ($P<0.05$) and the apoptotic index was lower in tumor tissues than in normal tissues. There was a significant pos. correlation between the copy number of survivin mRNA and the survival time and pathol. types, and there was a neg. correlation between the copy number of survivin mRNA and AI ($r=-0.252$, $P<0.05$). There

was a significant correlation between the pos. rate of survivin protein expression and survival time. The copy number of mRNA in the pos. protein expression group was higher than that in the neg. expression group, and the AI was lower in the pos. expression group than in the neg. expression group, but there was no statistical significance between them (P>0.05). There was no significant correlation between the expression of survivin mRNA and protein (P>0.05). The copy number of survivin mRNA and protein expression rates were higher in gastric carcinoma than in normal controls. Survivin mRNA and protein levels may be potential mol. indicators for prognosis. There is upregulation of survivin mRNA and protein expression in gastric cancer, which can be used as biol. index for diagnosis.

L8 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:1313378 CAPLUS
DN 148:29545
TI Real time PCR detection of survivin expression by molecular beacon in gastric carcinoma
AU Zheng, Hong; Sun, Baocun; Wang, Limei; Li, Xi; Wang, Jiacang
CS Cancer Hospital, Tianjin Medical University, Tianjin, 300060, Peop. Rep. China
SO Zhonghua Yixue Yanjiu Zazhi (2006), 6(6), 605-607
CODEN: ZYYZCU; ISSN: 1680-6115
PB Xianggang Yiyao Keji Chubanshe
DT Journal
LA Chinese
AB A real time fluorescent quant. method based on mol. beacon technique and quantification of mRNA expression of survivin gene in gastric carcinoma was developed. A mol. beacon probe and primers were designed and applied in the detection of survivin gene, while recombination plasmid containing the sequence of survivin was standard The copies of survivin expression were detected in gastric carcinoma, and relationship between copies and clin. data was analyzed. A linear standard curve was obtained between 103 and 1010 copies. The inter- and intra- assay coefficient variation (CV) was 28.16% and 13.34%, resp. The sensitivity of this assay was 42 copies. The average recovery was 109.83%. The copies of survivin expression were significantly higher in gastric carcinoma than in the other groups (P<0.05). There was a relationship between copies of survivin gene with lymph node metastasis, poor survival and histol. types. The method can detect copies of survivin expression. It might be an important indicator in predicting lymph nodes metastasis and evaluating the prognosis.

L8 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:889356 CAPLUS
TI Quantification of mRNA expression of survivin gene by molecular beacon and its applications in colorectal carcinoma
AU Zheng, Hong; Sun, Baocun; Hu, Jianzhang; He, Gang; Yang, Ping
CS The Cancer Hospital, Tianjin Medical University, Tianjin, 300060, Peop. Rep. China
SO Zhonghua Shiyan Waike Zazhi (2006), 23(5), 602-604
CODEN: ZSWZAA; ISSN: 1001-9030
PB Hubei Sheng Yixuehui, Bianji Chubanbu
DT Journal
LA Chinese
AB Objective: To develop and evaluate a real time fluorescent quant. method for quantification of mRNA expression of survivin gene based on mol. beacon technique. Methods: Mol. beacon probe and primer were designed and applied in the detection of survivin gene, while recombination plasmid containing the sequence of survivin was standardized. The quantification of mRNA expression was detected in colorectal carcinoma, and the

relationship between mRNA expression level and clin. data was analyzed. Results: A linear standard curve was obtained between 1+103 and 1+1010 copies. The inter- and intra-assay coefficient variations (CV) were 28.16% and 13.34%, resp. The sensitivity of this assay was 42 copies. The average recovery was 109.83%. The quantification of mRNA expression of survivin was significantly higher in colorectal carcinoma than those in the other groups (P<0.05). There was a relationship between survivin gene expression with different pathol. types and lymph node metastases. The method can detect absolute quantification of mRNA expression of survivin gene and can be applied to clin. diagnosis.

L8 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:45753 CAPLUS
DN 146:498207
TI Real-time detection of survivin mRNA expression in cervical cancer cell lines using molecular beacon imaging
AU An, Ruifang; He, Dalin; Xue, Yan; Wang, Shu; Xie, Li; Zhao, Jun; Wang, Xinyang; Yang, Lili
CS Department of Gynecology and Obstetrics, the First Affiliated Hospital of Medical School, Xi'an Jiaotong University, Xi'an, 710061, Peop. Rep. China
SO Academic Journal of Xi'an Jiaotong University (2006), 18(2), 167-170
CODEN: AJXJA3; ISSN: 1671-8267
PB Xi'an Jiaotong University
DT Journal
LA English
AB To detect the expression of survivin mRNA in cervical cancer cell lines using mol. beacon imaging technol. Human cervical cancer cells (HeLa and SiHa) and human fetal lung fibroblast HFL-I were cultured in vitro. After adding 100 nmol/L survivin mRNA mol. beacon, the fluorescent signals were observed under fluorescent microscope. The expressions of survivin in cervical cancer cells and HFL-I cell were examined by immunocytochem. streptravidin-biothin peroxidase (SP) assay at the same time. Two kinds of survivin mRNA mol. beacon, with different color fluorescence, had strong fluorescent signal in cervical cancer cell lines, and the signal in SiHa cell line was stronger, but these signals were not found in HFL-I; Immunocytochem. staining of pos. survivin was located in the cytoplasm of cervical cancer cell lines HeLa and SiHa, whereas, no expression of survivin was detected in HFL-I cell line. The technol. of mol. beacon imaging can be used to detect the expression of survivin mRNA in viable cells successfully, and may provide a new approach to the diagnosis of early stage cervical cancer and the following-up in the clinic.
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:697040 CAPLUS
DN 143:187906
TI Molecular beacon probes with quantum dots and intracellular carrier molecules, and methods for in vivo gene detection
IN Bao, Gang; Nitin, Nitin
PA Georgia Tech Research Corporation, USA
SO PCT Int. Appl., 147 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005071115	A1	20050804	WO 2005-US1771	20050121

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2004-538381P P 20040121
US 2004-538382P P 20040121

AB The invention provides mol. beacon probes for detecting a target polynucleotide. One aspect provides a mol. beacon probe set wherein the donor mol. beacon comprises a quantum dot and an acceptor mol. beacon comprises at least one reporter for the energy transfer that occurs when the probes hybridize to a target polynucleotide. The probes optionally comprise a peptide targeting signal or an intracellular delivery agent, or a combination thereof. The invention also provides methods for detecting target polynucleotides in cell lysates, tissues, or the cell interior using the disclosed probes. The invention specifically claims methods for detecting mutations in K-ras, survivin, p53, p16, DPC4 or BRCA2 genes. In the examples, a lanthanide donor probe comprising an oligonucleotide labeled at its 3'-end with a terbium chelate was tested with a series of acceptor mol. beacons labeled with Cy3, ROX, or Texas Red fluorophores. Extremely high signal-to-background ratios were observed due to the narrow emission peaks from lanthanide dyes (background) and the use of time-resolved fluorescence detection. A quencher mol. in the acceptor mol. beacons was not necessary. In another example, mutant K-ras and survivin mRNAs were detected in pancreatic cancer cells using dual mol . beacon FRET probes and fluorescence microscopy.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:216890 CAPLUS
DN 142:292455
TI Molecular beacons conjugated with transduction and targeting peptides
IN Bao, Gang; Nitin, Nitin; Nie, Shuming; Kim, Gloria J.
PA Georgia Tech Research Corporation, USA
SO PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005021712	A2	20050310	WO 2004-US20232	20040625

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2530221	A1	20050310	CA 2004-2530221	20040625

EP 1639093 A2 20060329 EP 2004-801961 20040625
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
JP 2007525967 T 20070913 JP 2006-517609 20040625
PRAI US 2003-482648P P 20030625
US 2004-874920 A 20040623
WO 2004-US20232 W 20040625
AB Mol. beacons modified with protein transduction domains to facilitate translocation of the oligonucleotide across cellular membranes are disclosed. The mol. beacons are also optionally modified with a targeting signal to direct the oligonucleotide to a specific cell, tissue, organ, intracellular region, organelle or vesicle. Thus, an oligonucleotide conjugated to Cy3 and BHQ2 and targeting survivin mRNA was attached via a disulfide bond to a TAT peptide. Incubation of this mol. beacon with human dermal fibroblast cells or with pancreatic cancer cell line MiaPaca-2 cells resulted in a low fluorescence signal in the former but a high fluorescence signal in the latter, consistent with the known level of expression of the survivin gene in each cell.

L8 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:207047 CAPLUS
DN 142:442529
TI Real-time detection of gene expression in cancer cells using molecular beacon imaging: new strategies for cancer research
AU Peng, Xiang-Hong; Cao, Ze-Hong; Xia, Jin-Tang; Carlson, Grant W.; Lewis, Melinda M.; Wood, William C.; Yang, Lily
CS Department of Surgery, Winship Cancer Institute, Emory University School of Medicine, Atlanta, GA, 30322, USA
SO Cancer Research (2005), 65(5), 1909-1917
CODEN: CNREA8; ISSN: 0008-5472
PB American Association for Cancer Research
DT Journal
LA English
AB Development of novel approaches for quant. anal. of gene expression in intact tumor cells should provide new means for cancer detection and for studying the response of cancer cells to biol. and therapeutic reagents. We developed procedures for detecting the levels of expression of multiple genes in fixed as well as viable cells using mol. beacon imaging technol. We found that simultaneous delivery of mol. beacons targeting survivin and cyclin D1 mRNAs produced strong fluorescence in breast cancer but not in normal breast cells. Importantly, fluorescence intensity correlated well with the level of gene expression in the cells detected by real-time reverse transcription-PCR or Western blot anal. We further show that mol. beacons can detect changes of survivin gene expression in viable cancer cells following epidermal growth factor stimulation, docetaxel treatment, and overexpression of p53 gene. Thus, mol. beacon imaging is a simple and specific method for detecting gene expression in cancer cells. It has great potential for cancer detection and drug development.
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2006:239890 CAPLUS
DN 145:370334
TI Molecular beacon imaging of tumor marker gene expression in pancreatic cancer cells
AU Yang, Lily; Cao, Zehong; Lin, Yiming; Wood, William C.; Staley, Charles A.
CS Department of Surgery and Winship Cancer Institute, Emory University School of Medicine, Atlanta, GA, USA

SO Cancer Biology & Therapy (2005), 4(5), 561-570
CODEN: CBTAAO; ISSN: 1538-4047
PB Landes Bioscience
DT Journal
LA English
AB We have developed a fluorescence imaging-based approach to detect expression of tumor marker genes in pancreatic cancer cells using mol. beacons (MBs). MBs are short hairpin oligonucleotide probes that bind to specific oligonucleotide sequences and produce fluorescent signals. MBs targeting transcripts of two tumor marker genes, mutant K-ras and survivin, were synthesized and their specificity in detection of the expression of those genes in pancreatic cancer cells was examined We found that K-ras MBs differentially bind to mutant K-ras mRNAs, resulting in strong fluorescent signals in pancreatic cancer cells with specific mutant K-ras genes but not in normal cells or cancer cells expressing either wild type or a different mutation of the K-ras gene. Addnl., MBs targeting survivin mRNA produced a bright fluorescent signal specifically in pancreatic cancer cells. We also demonstrated that MBs labeled with different fluorophores could detect survivin and mutant K-ras mRNAs simultaneously in single cancer cells. Furthermore, we showed that survivin and K-ras MBs have a high specificity in identifying cancer cells on frozen sections of pancreatic cancer tissues. In conclusion, mol. beacon-based imaging of expression of tumor marker genes has potential for the development of novel approaches for the detection of pancreatic cancer cells.
RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:610024 CAPLUS
DN 141:152157
TI Methods of detecting gene expression in normal and cancerous cells
IN Yang, Lily; Bao, Gang; Staley, Charles; Cohen, Cynthia
PA Emory University, USA
SO PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004062487	A2	20040729	WO 2004-US755	20040113
	WO 2004062487	A3	20070705		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AP, BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, EA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, EP, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, OA, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004204820	A1	20040729	AU 2004-204820	20040113
	CA 2512956	A1	20040729	CA 2004-2512956	20040113
	JP 2006526390	T	20061124	JP 2006-500924	20040113
	CN 101061236	A	20071024	CN 2004-80002145	20040113
	US 2006210979	A1	20060921	US 2005-542117	20050712
PRAI	US 2003-439771P	P	20030113		
	WO 2004-US755	W	20040113		

AB The present invention provides methods for detecting gene expression in

normal and cancerous cells. Specifically, provided are methods utilizing mol. beacons (MB) technol. combined with fluorescence imaging techniques for detecting, identifying or quantitating the presence of, or alterations in gene expression of, various tumor markers in a sample of cells.

L8 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:6168 CAPLUS
DN 138:67816
TI Dual resonance energy transfer nucleic acid probes and their use in cancer diagnosis
IN Bao, Gang; Tsourkas, Andrew; Xu, Yangqing
PA Georgia Tech Research Corporation, USA
SO PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003000933	A1	20030103	WO 2002-US20094	20020625
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2451614	A1	20030103	CA 2002-2451614	20020625
	AU 2002316377	A1	20030108	AU 2002-316377	20020625
	EP 1409735	A1	20040421	EP 2002-746673	20020625
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004532649	T	20041028	JP 2003-507314	20020625
PRAI	US 2001-300672P	P	20010625		
	US 2001-303258P	P	20010703		
	WO 2002-US20094	W	20020625		

AB Dual nucleic acid probes with resonance energy transfer moieties are provided. In particular, fluorescent or luminescent resonance energy transfer (FRET or LRET, resp.) moieties are provided on hairpin stem-loop mol. beacon probes that hybridize sufficiently near each other on a subject nucleic acid, e.g. mRNA, to generate an observable interaction. The invention also provides lanthanide chelate LRET moieties on linear and stem-loop probes that hybridize sufficiently near each other on a subject nucleic acid to generate an observable interaction. The invention thereby provides detectable signals for rapid, specific and sensitive hybridization determination in vivo. The probes are used in methods of detection of nucleic acid target hybridization for the identification and quantification of tissue and cell-specific gene expression levels, including response to external stimuli, such as drug candidates, and genetic variations associated with disease, such as cancer. Thus, the method was demonstrated using two probes capable of FRET or LRET when bound next to each other on the human glyceraldehyde-3-phosphate dehydrogenase gene. Similar probes which may be used for detection of K-ras mutations or levels of survivin gene expression are presented.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s L5 and (K-ras)

```
L9          90 S L5
       1443171 K
         35557 RAS
             2 RASES
         35558 RAS
                 (RAS OR RASES)
          3320 K-RAS
                 (K(W)RAS)
L10          9 L9 AND (K-RAS)

=> duplicate remove L10
PROCESSING COMPLETED FOR L10
L11           9 DUPLICATE REMOVE L10 (0 DUPLICATES REMOVED)

=> d L11 bib abs 1-9

L11  ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2006:544511  CAPLUS
DN   145:44357
TI   Use of molecular beacons detecting cyclin D1 and
     survivin mRNAs in diagnostic imaging of cancer cells
IN   Yang, Lily
PA   Emory University, USA
SO   PCT Int. Appl., 80 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 2
     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
PI   WO 2006060561         A2    20060608    WO 2005-US43450         20051201
     WO 2006060561         A3    20060817
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
             KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
             MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
             SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
             VN, YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
     US 2006210979         A1    20060921    US 2005-542117          20050712
PRAI US 2004-632666P       P     20041201
     US 2005-542117        A     20050712
     US 2003-439771P       P     20030113
     WO 2004-US755         W     20040113
AB   A method of detecting the level of expression of diagnostic gene in a
     sample of cells for cancer diagnosis using mol.
     beacon probes is described.  Specifically, the use of probes for
     the detection of cyclin D1 and survivin mRNAs are described for the
     diagnosis of breast cancer.  The development of systems for the
     detection of cyclin D1 and survivin mRNAs is demonstrated.  Use of
     mol. beacons to detect alleles of the K-
     ras gene in the diagnosis of pancreatic cancer is also
     demonstrated.

L11  ANSWER 2 OF 9  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2005:697040  CAPLUS
DN   143:187906
TI   Molecular beacon probes with quantum dots and
     intracellular carrier molecules, and methods for in vivo gene detection
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IN Bao, Gang; Nitin, Nitin
PA Georgia Tech Research Corporation, USA
SO PCT Int. Appl., 147 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005071115	A1	20050804	WO 2005-US1771	20050121

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2004-538381P	P	20040121	
US 2004-538382P	P	20040121	

AB The invention provides mol. beacon probes for detecting a target polynucleotide. One aspect provides a mol. beacon probe set wherein the donor mol. beacon comprises a quantum dot and an acceptor mol. beacon comprises at least one reporter for the energy transfer that occurs when the probes hybridize to a target polynucleotide. The probes optionally comprise a peptide targeting signal or an intracellular delivery agent, or a combination thereof. The invention also provides methods for detecting target polynucleotides in cell lysates, tissues, or the cell interior using the disclosed probes. The invention specifically claims methods for detecting mutations in K-ras, survivin, p53, p16, DPC4 or BRCA2 genes. In the examples, a lanthanide donor probe comprising an oligonucleotide labeled at its 3'-end with a terbium chelate was tested with a series of acceptor mol. beacons labeled with Cy3, ROX, or Texas Red fluorophores. Extremely high signal-to-background ratios were observed due to the narrow emission peaks from lanthanide dyes (background) and the use of time-resolved fluorescence detection. A quencher mol. in the acceptor mol. beacons was not necessary. In another example, mutant K-ras and survivin mRNAs were detected in pancreatic cancer cells using dual mol. beacon FRET probes and fluorescence microscopy.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:207047 CAPLUS
DN 142:442529
TI Real-time detection of gene expression in cancer cells using molecular beacon imaging: new strategies for cancer research
AU Peng, Xiang-Hong; Cao, Ze-Hong; Xia, Jin-Tang; Carlson, Grant W.; Lewis, Melinda M.; Wood, William C.; Yang, Lily
CS Department of Surgery, Winship Cancer Institute, Emory University School of Medicine, Atlanta, GA, 30322, USA
SO Cancer Research (2005), 65(5), 1909-1917
CODEN: CNREA8; ISSN: 0008-5472
PB American Association for Cancer Research
DT Journal
LA English
AB Development of novel approaches for quant. anal. of gene expression in

intact tumor cells should provide new means for cancer detection and for studying the response of cancer cells to biol. and therapeutic reagents. We developed procedures for detecting the levels of expression of multiple genes in fixed as well as viable cells using mol. beacon imaging technol. We found that simultaneous delivery of mol. beacons targeting survivin and cyclin D1 mRNAs produced strong fluorescence in breast cancer but not in normal breast cells. Importantly, fluorescence intensity correlated well with the level of gene expression in the cells detected by real-time reverse transcription-PCR or Western blot anal. We further show that mol. beacons can detect changes of survivin gene expression in viable cancer cells following epidermal growth factor stimulation, docetaxel treatment, and overexpression of p53 gene. Thus, mol. beacon imaging is a simple and specific method for detecting gene expression in cancer cells. It has great potential for cancer detection and drug development.

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2006:239890 CAPLUS
DN 145:370334
TI Molecular beacon imaging of tumor marker gene expression in pancreatic cancer cells
AU Yang, Lily; Cao, Zehong; Lin, Yiming; Wood, William C.; Staley, Charles A.
CS Department of Surgery and Winship Cancer Institute, Emory University School of Medicine, Atlanta, GA, USA
SO Cancer Biology & Therapy (2005), 4(5), 561-570
CODEN: CBTAAO; ISSN: 1538-4047
PB Landes Bioscience
DT Journal
LA English
AB We have developed a fluorescence imaging-based approach to detect expression of tumor marker genes in pancreatic cancer cells using mol. beacons (MBs). MBs are short hairpin oligonucleotide probes that bind to specific oligonucleotide sequences and produce fluorescent signals. MBs targeting transcripts of two tumor marker genes, mutant K-ras and survivin, were synthesized and their specificity in detection of the expression of those genes in pancreatic cancer cells was examined We found that K-ras MBs differentially bind to mutant K-ras mRNAs, resulting in strong fluorescent signals in pancreatic cancer cells with specific mutant K-ras genes but not in normal cells or cancer cells expressing either wild type or a different mutation of the K-ras gene. Addnl., MBs targeting survivin mRNA produced a bright fluorescent signal specifically in pancreatic cancer cells. We also demonstrated that MBs labeled with different fluorophores could detect survivin and mutant K-ras mRNAs simultaneously in single cancer cells. Furthermore, we showed that survivin and K-ras MBs have a high specificity in identifying cancer cells on frozen sections of pancreatic cancer tissues. In conclusion, mol. beacon-based imaging of expression of tumor marker genes has potential for the development of novel approaches for the detection of pancreatic cancer cells.

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:6168 CAPLUS
DN 138:67816
TI Dual resonance energy transfer nucleic acid probes and their use in cancer diagnosis

IN Bao, Gang; Tsourkas, Andrew; Xu, Yangqing
PA Georgia Tech Research Corporation, USA
SO PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003000933	A1	20030103	WO 2002-US20094	20020625
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2451614	A1	20030103	CA 2002-2451614	20020625
	AU 2002316377	A1	20030108	AU 2002-316377	20020625
	EP 1409735	A1	20040421	EP 2002-746673	20020625
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004532649	T	20041028	JP 2003-507314	20020625
PRAI	US 2001-300672P	P	20010625		
	US 2001-303258P	P	20010703		
	WO 2002-US20094	W	20020625		

AB Dual nucleic acid probes with resonance energy transfer moieties are provided. In particular, fluorescent or luminescent resonance energy transfer (FRET or LRET, resp.) moieties are provided on hairpin stem-loop mol. beacon probes that hybridize sufficiently near each other on a subject nucleic acid, e.g. mRNA, to generate an observable interaction. The invention also provides lanthanide chelate LRET moieties on linear and stem-loop probes that hybridize sufficiently near each other on a subject nucleic acid to generate an observable interaction. The invention thereby provides detectable signals for rapid, specific and sensitive hybridization determination in vivo. The probes are used in methods of detection of nucleic acid target hybridization for the identification and quantification of tissue and cell-specific gene expression levels, including response to external stimuli, such as drug candidates, and genetic variations associated with disease, such as cancer. Thus, the method was demonstrated using two probes capable of FRET or LRET when bound next to each other on the human glyceraldehyde-3-phosphate dehydrogenase gene. Similar probes which may be used for detection of K-ras mutations or levels of survivin gene expression are presented.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:930837 CAPLUS
DN 140:1538
TI Rolling circle amplification and PCR-SSCP for evaluating cancer risk by detection of mutated allele
IN Costa, Jose
PA USA
SO U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of U.S. Ser. No. 44,735.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	US 2003219765	A1	20031127	US 2002-271179	20021015
PRAI	US 2000-191557P	P	20000323		
	US 2001-814200	A1	20010321		
	US 2002-44735	A2	20020111		

AB The present invention is directed to a method of evaluating the risk of cancer development in a patient, comprising the steps of: (1) providing from the patient a sample of material for which the risk of cancer development is to be evaluated; (2) quantitating the proportion of mutated alleles in the sample, relative to nonmutated alleles; (3) quantitating the degree of diversity of mutated alleles in the sample; (4) correlating the proportion of mutated alleles and the degree of diversity of mutated alleles; and (5) repeating steps (1) to (4) for a sufficient time to evaluate the risk of cancer development in the patient. The methods includes rolling circle amplification, hyperbranched rolling circle amplification, PCR-SSCP, mol. beacon microarray and fiber-based in situ hybridization. The invention also provides the sequences of probe for detection of mutation in k-ras gene.

L11 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:382209 CAPLUS
DN 139:97515
TI Approaching Real-Time Molecular Diagnostics: Single-Pair Fluorescence Resonance Energy Transfer (spFRET) Detection for the Analysis of Low Abundant Point Mutations in K-ras Oncogenes
AU Wabuyele, Musundi B.; Farquar, Hannah; Stryjewski, Wieslaw; Hammer, Robert P.; Soper, Steven A.; Cheng, Yu-Wei; Barany, Francis
CS Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
SO Journal of the American Chemical Society (2003), 125(23), 6937-6945
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
AB The aim of this study was to develop new strategies for analyzing mol. signatures of disease states approaching real-time using single pair fluorescence resonance energy transfer (spFRET) to rapidly detect point mutations in unamplified genomic DNA. In addition, the detection process was required to discriminate between normal and mutant (minority) DNAs in heterogeneous populations. The discrimination was carried out using allele-specific primers, which flanked the point mutation in the target gene and were ligated using a thermostable ligase enzyme only when the genomic DNA carried this mutation. The allele-specific primers also carried complementary stem structures with end-labels (donor/acceptor fluorescent dyes, Cy5/Cy5.5, resp.), which formed a mol. beacon following ligation. We coupled ligase detection reaction (LDR) with spFRET to identify a single base mutation in codon 12 of a K-ras oncogene that has high diagnostic value for colorectal cancers. A simple diode laser-based fluorescence system capable of interrogating single fluorescent mols. undergoing FRET was used to detect photon bursts generated from the mol. beacon probes formed upon ligation. LDR-spFRET provided the necessary specificity and sensitivity to detect single-point mutations in as little as 600 copies of human genomic DNA directly without PCR at a level of 1 mutant per 1000 wild type sequences using 20 LDR thermal cycles. We also demonstrate the ability to rapidly discriminate single base differences in the K-ras gene in less than 5 min at a frequency of 1 mutant DNA per 10 normals using only a single LDR thermal cycle of genomic DNA (600 copies). Real-time LDR-spFRET detection of point mutations in the K-ras gene was accomplished in PMMA microfluidic devices using sheath flows.
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:276115 CAPLUS
DN 136:305089
TI Test kits for detection of ras oncogene mutations associated with cancer using restriction endonuclease-mediated selective PCR and nested PCR methods
IN Belly, Robert T.; Todd, Alison V.; Fuery, Caroline J.
PA Ortho-Clinical Diagnostics, Inc., USA
SO PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002029005	A2	20020411	WO 2001-US42422	20011002
	WO 2002029005	A3	20040226		
	W: AU, CA, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	CA 2424584	A1	20020411	CA 2001-2424584	20011002
	AU 200196955	A	20020415	AU 2001-96955	20011002
	EP 1412512	A2	20040428	EP 2001-977871	20011002
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	JP 2004518412	T	20040624	JP 2002-532576	20011002
	US 2004106109	A1	20040603	US 2002-110707	20021209
	AU 2007216745	A1	20071004	AU 2007-216745	20070912
PRAI	US 2000-237416P	P	20001002		
	AU 2001-296955	A3	20011002		
	WO 2001-US42422	W	20011002		

AB Mutations in K-ras, N-ras, and H-ras were determined using target specific primers and probes in REMS-PCR (restriction endonuclease-mediated selective PCR) methods, nested PCR methods employing a restriction endonuclease, and REMS-PCR methods using mol. beacons. The REMS-PCR method employs a thermostable restriction endonuclease (in addition to the thermostable DNA polymerase), capable of directly cleaving the wild type ras sequence or a primer-induced cleavage site, or both. Thus, the wild type K-ras, N-ras or H-ras DNA is cleaved, while the mutant sequence is amplified and detected by fluorescence. The oligonucleotide primers may be labeled with one or more fluorescent moieties at the 3' end and one or more fluorescent quenching moieties at the 5' end, where the nucleotides at the 3' and 5' ends are complementary, or vice-versa. One or more of the oligonucleotides may also be immobilized to a solid support and is capable of capturing the mutant ras sequence. Kits for detection of ras mutations are another embodiment of the present invention. These methods are useful for determining ras mutations in samples having low copy number of the target nucleic acid. Furthermore, containment devices in test kits for reducing contamination and automation of these methods provide other advantages to using this technol.

L11 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:81618 CAPLUS
DN 130:149525
TI Diagnostic primers for detection of human K-ras mutations in colorectal cancer
IN Ferrie, Richard Mark; Ellison, Gillian; Callaghan, Kay; Fox, Jayne Catherine
PA Zeneca Limited, UK
SO PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DT Patent

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LA   English
FAN.CNT 1
     PATENT NO.            KIND   DATE        APPLICATION NO.          DATE
     ---------------       ----   --------    --------------------     --------
PI   WO 9904037             A1    19990128    WO 1998-GB2088           19980715
         W:  JP, US
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
     GB 2327497             A     19990127    GB 1998-15224            19980715
     GB 2327497             B     19991208
PRAI GB 1997-15034          A     19970718
AB   A diagnostic assay is provided for the detection of K-
     ras mutations in cancer.  The method comprises
     contacting a test sample of nucleic acid with a diagnostic primer for a
     K-ras mutation in the presence of appropriate nucleotide
     triphosphates and an agent for polymerization, such that the diagnostic primer
is
     extended only when a K-ras mutation is present in the
     sample; and detecting the presence or absence of a diagnostic primer
     extension product.  Diagnostic primers for seven K-ras
     point mutations are provided.  Also included is a diagnostic kit in which
     one or more diagnostic primers are conveniently packaged with appropriate
     nucleotide triphosphates, polymerase, buffer and instructions for use.
RE.CNT  5     THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> s L5 and (Her2/neu)
L12          90 S L5
'NEU' IS NOT A VALID FIELD CODE
              0 HER2/NEU
L13           0 L12 AND (HER2/NEU)

=> s L5 and Her2
L14          90 S L5
          4127 HER2
L15           2 L14 AND HER2

=> duplicate remove L15
PROCESSING COMPLETED FOR L15
L16           2 DUPLICATE REMOVE L15 (0 DUPLICATES REMOVED)

=> d L16 bib abs 1-2

L16  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2003:335262  CAPLUS
DN   138:349698
TI   Screening system for modulators of gene HER2 (neu/ErbB2)
     transcription, HER2 modulators identified thereby, and methods
     involving HER2 SNPs
IN   Benz, Christopher C.
PA   Buck Institute for Age Research, USA
SO   PCT Int. Appl., 103 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.            KIND   DATE        APPLICATION NO.          DATE
     ---------------       ----   --------    --------------------     --------
PI   WO 2003035843          A2    20030501    WO 2002-US34288          20021025
     WO 2003035843          A3    20040826
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
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LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU	2002353891	A1	20030506	AU 2002-353891	20021025
US	2005123896	A1	20050609	US 2004-493141	20041025
PRAI US	2001-346262P	P	20011025		
US	2001-335290P	P	20011130		
US	2002-374161P	P	20020417		
WO	2002-US34288	W	20021025		

AB This invention pertains to the development of a screening system to identify (screen for) gene HER2 (neu/ErbB2) promoter silencing agents. Such agents are expected to be of therapeutic value in the treatment of cancers characterized by HER2 amplification/upregulation. In addition, this invention pertains to the discovery that histone deacetylase (HDAC) inhibitors like sodium butyrate and trichostatin A (TSA), in a time and dose dependent fashion can silence genomically integrated and/or amplified/overexpressing promoters, such as that driving the HER2 (neu/ErbB2) oncogene, resulting in inhibition of gene products including transcripts and protein, and subsequent production of tumor/cell growth inhibition, apoptosis and/or differentiation. In another embodiment, this invention provides novel single nucleotide polymorphisms (SNPs) associated with the coding region of the HER2 proto-oncogene. The SNPs are indicators for altered risk, for developing ErbB2-pos. cancer in a mammal.

L16 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:723700 CAPLUS
DN 138:33850
TI Direct measurement of the association constant of HER2/neu antisense oligonucleotide to its target RNA sequence using a molecular beacon
AU Vijayanathan, Veena; Thomas, Thresia; Sigal, Leonard H.; Thomas, T. J.
CS Department of Medicine, University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School, New Brunswick, NJ, 08903, USA
SO Antisense & Nucleic Acid Drug Development (2002), 12(4), 225-233
CODEN: ANADF5; ISSN: 1087-2906
PB Mary Ann Liebert, Inc.
DT Journal
LA English
AB A mol. beacon approach was developed to directly determine the association constant of RNA-DNA hybrid formation. The mol. beacon was composed of a 15-nt loop structure containing the antisense sequence that can hybridize with the AUG translational start site of the HER2/neu gene, which is overexpressed in a significant proportion of breast, ovarian, and lung tumors. The equilibrium association constant (Ka) of DNA binding to the RNA oligonucleotide was 6.4 ± 0.14 + 107 M-1 in the presence of 150 mM NaCl at 22°C. The free energy change (ΔG) associated with RNA-DNA hybrid formation was -10.7 kcal/mol. The melting temperature (Tm) of RNA-DNA hybrid was 64.4°C ± 1°C in the presence of 150 mM NaCl. The RNA-DNA hybrid was more stable than the corresponding DNA-DNA duplex in 150 mM NaCl, as judged by both Ka and Tm data. We also determined the Ka, ΔG, and Tm values of RNA-DNA and DNA-DNA duplex formation in the presence of three monovalent cations, Li+, K+, and Cs+. The feasibility of this method was also investigated using a phosphorothioate mol. beacon.
The information generated through this new approach for thermodn. measurements might be useful for the design of oligonucleotides for antisense therapeutics.
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ALL CITATIONS AVAILABLE IN THE RE FORMAT